

CLAIMS

Comment: Use the style "claim number,cn" for the paragraphs with claims numbers.

Use "body text first indent2,btft2" for paragraphs without claim numbers.

WHAT IS CLAIMED IS:

1. A coating material applicator comprising:
an applicator body;
a rotary atomizing head at one end of said body; and
air passages providing a natural flow of ambient air to a low pressure area behind said rotary atomizing head, each said passage having a first opening remote from said head exposed to ambient air and a second opening behind said head in the low pressure area created by rotation of said head.
2. The applicator of claim 1, including a shroud on said body behind said head, and said passages being disposed in said shroud.
3. The applicator of claim 2, said shroud having a side surface and an end surface, and each said passage having an opening thereto in each said surface.
4. The applicator of claim 3, said openings in said side surface being disposed near an opposite end of said shroud from said end surface.
5. The applicator of claim 3, said passages angling inwardly from said side surface to said end surface.
6. The applicator of claim 5, said openings in said side surface being disposed near an opposite end of said shroud from said end surface.
7. The applicator of claim 6, said shroud being frustoconical.

8. A shroud for an applicator having a rotary atomizing head, said shroud comprising:

a side wall having a side surface;

an end wall at one end of said side wall, said end wall having an end surface and defining a hole therethrough for receiving a rotary component of said atomizing head; and

at least one passage defined through said side wall, each said passage having a first opening thereto in said side surface exposed to ambient air, and a second opening thereto in said end surface, said second opening being disposed near said hole.

9. The shroud of claim 8, said openings in said side surface being disposed near an opposite end of said side wall from said end wall.

10. The shroud of claim 8, said at least one passage angling inwardly from said side surface to said end surface.

11. The shroud of claim 10, said openings in said side surface being disposed near an opposite end of said side wall from said end wall.

12. The shroud of claim 11, said shroud body being frustoconical.

13. The shroud of claim 12, said end wall defining a pattern of shaping air nozzles therein, and said second openings being disposed in said end wall between said hole and said pattern of shaping air nozzles.

14. The shroud of claim 8, said end wall defining a pattern of shaping air nozzles therein, and said second openings being disposed in said end wall between said hole and said pattern of shaping air nozzles.

15. The shroud of claim 8, said shroud body being frustoconical.

16. A method of operating a rotary atomizing applicator comprising steps of:

rotating a rotary atomizing head at high speed to atomizing a coating material supplied thereto, and thereby creating an area of low pressure behind the rotating head; and

directing a natural flow of ambient air through passages in said applicator having first openings exposed to ambient air and second openings behind the rotary atomizing head.

17. The method of claim 16, including providing a shroud behind the rotary atomizing head with the passages in the shroud, and directing the natural flow of air through the shroud.

18. The method of claim 17, including drawing ambient air into the passages through openings in a side surface of the shroud.

19. The method of claim of claim 18, including directing ambient air from the passages to a radially inner area behind the rotating atomizing head.

20. The method of claim of claim 16, including directing ambient air from the passages to a radially inner area behind the rotating atomizing head.